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### (54) Detection and removal of clipping in multicarrier receivers

(57) A COFDM receiver includes a tuner/demodulator (34), an analog-to-digital converter (36), an impulse processor (38), and an OFDM demodulator (40). The

impulse processor detects digital values which equal the clipping level in the ADC, and assumes that these represent impulsive interference. These samples are then replaced by samples of zero value.

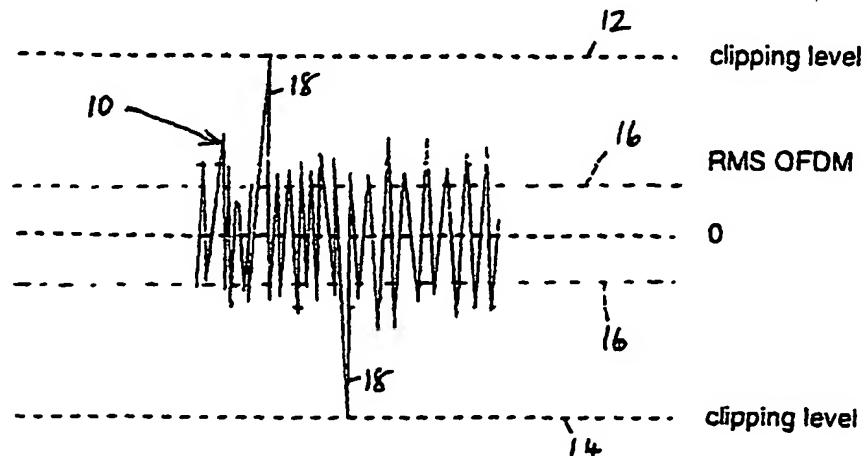


Fig. 1



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## EUROPEAN SEARCH REPORT

Application Number  
EP 00 30 2973

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.)						
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim							
X	ZOGAKIS T N ET AL: "IMPULSE NOISE MITIGATION STRATEGIES FOR MULTICARRIER MODULATION" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON COMMUNICATIONS (ICC). GENEVA, MAY 23 - 26, 1993, IEEE, NEW YORK, USA, vol. 2, 23 May 1993 (1993-05-23), pages 784-788, XP000371191 ISBN: 0-7803-0950-2 * page 786, left-hand column, paragraph 1 *	1-10	H04L27/26						
X	US 4 736 163 A (BERKHOUT PETRUS J ET AL) 5 April 1988 (1988-04-05) * column 7, line 66 - column 6, line 52 * * column 12, line 25 - line 34 *	1-10							
X	--- EP 0 869 624 A (AT & T CORP) 7 October 1998 (1998-10-07) * column 15, line 26 - line 44 * * figure 16C *	1-10							
E	--- WO 01 52494 A (KONINKL PHILIPS ELECTRONICS NV) 19 July 2001 (2001-07-19) * page 5, line 18 - line 29 * * page 6, line 31 - page 7, line 2 * -----	1-10	TECHNICAL FIELDS SEARCHED (Int.Cl.) H04L						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 33%;">Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>12 September 2003</td> <td>Orozco Roura, C</td> </tr> </table> <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  C : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>				Place of search	Date of completion of the search	Examiner	THE HAGUE	12 September 2003	Orozco Roura, C
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THE HAGUE	12 September 2003	Orozco Roura, C							

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 00 30 2973

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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